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ABSTRACT

This analysis of educational practices in the United States takes the position that a number of practices, including the way teachers are trained, textbooks selected, and college and university faculty rewarded, have become institutionalized and endure in spite of the reform efforts of the past decade. These practices, once established on a large scale, became both counterproductive and resistant to change. A reform agenda is suggested, establishing and encouraging alternatives. These include: (1) parental choice of elementary/secondary schools; (2) alternative paths to certification for prospective teachers; (3) alternatives to the mechanical criteria commonly used to select textbooks; (4) alternatives to the Scholastic Aptitude Test (SAT) such as the National Assessment of Educational Progress; (5) inservice opportunities for teachers to study their subjects; (6) paths to recognition and reward for college faculty that emphasize teaching as well as research; and (7) well-informed choices for college selection for students and parents. The value of cultural and educational programs--"the parallel school" offered by museums, libraries, the theater, and exemplary television presentations--is discussed. (140 endnotes) (JD)

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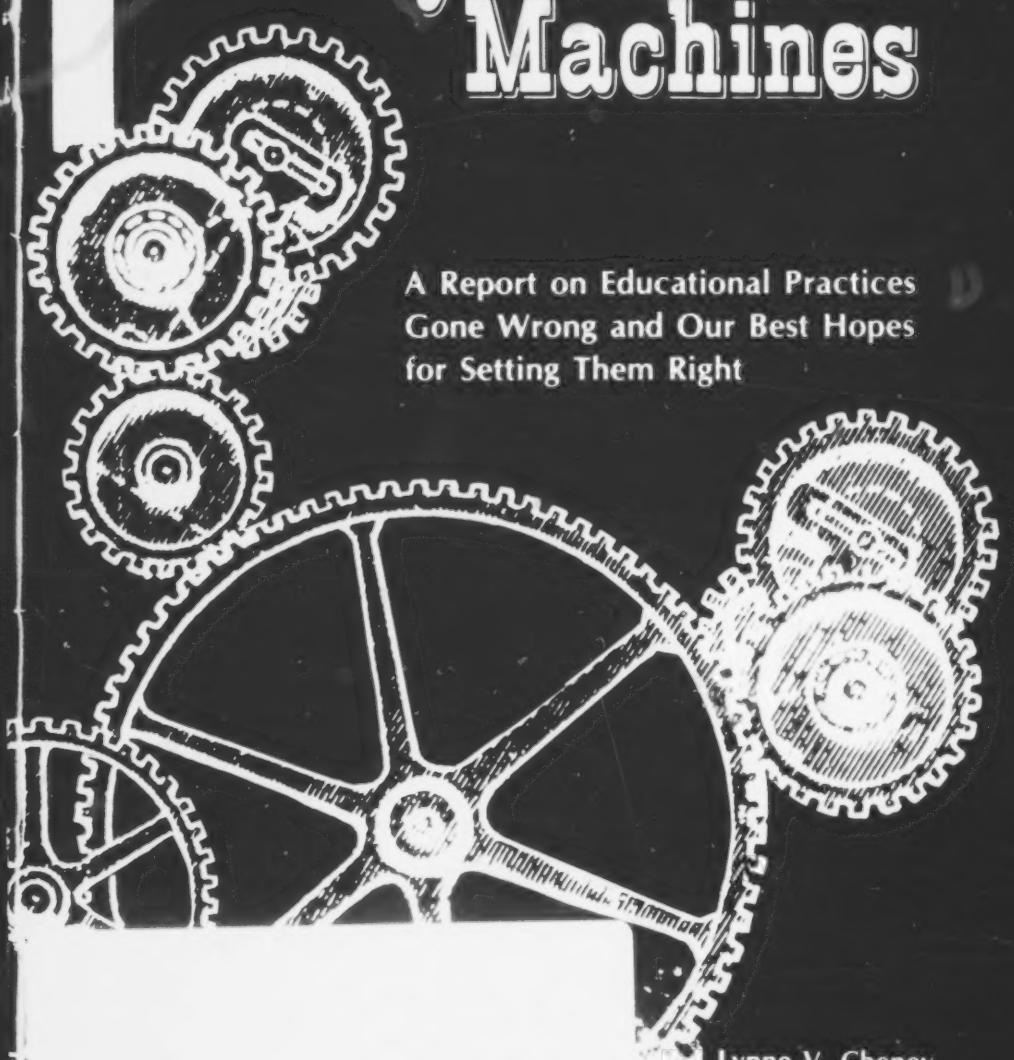
Tyrannical Machines



A Report on Educational Practices Gone Wrong and Our Best Hopes for Setting Them Right

Lynne V. Cheney
Chairman

National Endowment for the Humanities

Tyrannical Machines

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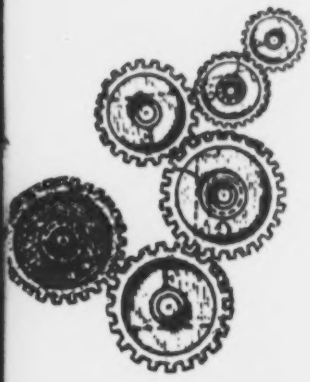

National Endowment for the Humanities

Washington, D.C.
1990

The institutionizing on a large scale of any
natural combination of need and motive always tends
to run into technicality and to develop a
tyrannical Machine
with unforeseen powers of exclusion and corruption.

William James
March 1903

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Introduction

Time and again, reformers have pointed out the failings of American education. They have cited its unsuccessful practices repeatedly—and quite often futilely. Even when reformers have built consensus on a matter—that we do not train our teachers properly, for example—practice has frequently changed only at the margins. How is it that we can so often see where we are going wrong and yet be unable to change direction? Indeed, how is it that we get off track in the first place?

Philosopher William James might have blamed what he called "institutionizing on a large scale." As James described it, ways of doing things that are well justified in the beginning tend, when established widely, to become "tyrannical machines."[1] Practices that begin by filling needs become detached from their original purposes, even counterproductive to them. Having been adopted on a large scale, however, these practices take on a power of their own. We force prospective schoolteachers to take education courses that waste their time. We place expectations on college and university faculty members that discourage them from devoting time to students and the classroom. Thoughtful teachers and faculty members, as well as concerned administrators, chafe under these regimes; but the machines, larger than any individual or school, roll on.

Practices that begin by filling needs become detached from their original purposes, even counterproductive to them.

Tyrannical machines dominate American education and have contributed to its failures. In the humanities, many students lack knowledge basic to understanding both past and present. A 1986 survey of high-school juniors funded by the National Endowment for the Humanities showed more than two-thirds of the nation's seventeen-year-olds unable to date the Civil War within the correct half-century. More than two-thirds could not identify the Reformation or Magna Carta. The vast majority was unfamiliar with writers

such as Dante, Chaucer, Whitman, Melville, and Cather.[2] A 1989 survey, also funded by the NEH, showed one out of four college seniors unable to distinguish Churchill's words from Stalin's or Karl Marx's thoughts from the ideas of the United States Constitution. More than half failed to understand the purpose of the Emancipation Proclamation or *The Federalist* papers. To most college seniors, Jane Austen's *Pride and Prejudice*, Dostoyevsky's *Crime and Punishment*, and Martin Luther King, Jr.'s "Letter from Birmingham Jail" were clearly unfamiliar.[3]

Other surveys and assessments make clear that the level of mathematical competency among American students is unacceptably low, as are levels of scientific and geographic literacy. A 1988 report from the International Assessment of Educational Progress showed more than half of the thirteen-year-olds in the United States unable to answer such questions as whether plants lean toward or away from light. A 1988 National Geographic survey showed a majority of American high-school graduates unable to identify Argentina, Chile, or Peru on a map—or Ohio, Michigan, or New Jersey.[4]

The first stage of the education reform movement of the 1980s revealed how impervious tyrannical machines can be.

The first stage of the education reform movement of the 1980s revealed how impervious tyrannical machines can be. Exposing them—showing the world the multitude of ways in which they violate good sense—is not sufficient to alter them. Change requires larger programs of action, and it is exactly such programs that have characterized the second stage of the movement to reinvigorate schooling from kindergarten through graduate school. Thus, this report not only describes tyrannical machines—educational practices gone wrong—but also considers some of the most important work under way to set them right. These efforts involve creating alternatives to tyrannical machines, optional practices that students, parents, and teachers can choose.

This report also considers humanities education as it occurs outside formal institutions of education. The "parallel school"—the informal world of teaching and learning created by museums, libraries, and state humanities councils—provides an example of how education can flourish when alternatives are abundant and people can choose freely among them.

We present this report as a way of fulfilling a congressional mandate to assess periodically the state of the humanities. Although our task was assigned, we have under-

taken it with enthusiasm. It is hard to conceive a project more important than encouraging the creative and thoughtful work to reform education that is currently ongoing in this country. This work will, in large measure, determine the future of our children—and the future of the American nation.

In the early years of the United States, Thomas Jefferson observed, "If a nation expects to be ignorant and free, in a state of civilization, it expects what never was and never will be."[5] His words apply with equal force to a country that has celebrated 200 years of constitutional government and embarked upon its third century.

Schools

Teachers

"The only thing I remember from my teacher preparation is getting through it," says history teacher Howard Safier of Fairfax High School in Los Angeles. "It was worthless, almost worthless."[6]

For decades, countless teachers across the country have been making similar complaints. Although they agree almost universally that carefully supervised practice teaching is valuable, and although many can recall an education course or two—usually taught by someone with recent classroom experience—that offered useful insights, teachers repeatedly speak of time wasted when they describe their professional preparation. They view many of the requirements imposed upon them as arbitrary and unjustified, and analysts of American education have long agreed. In the 1950s, historian Arthur Bestor, in a sustained critique, called teacher preparation "a fraud upon the teachers themselves and upon society as a whole."[7] In the 1960s, educator James B. Conant concluded that certification procedures, which require prospective teachers to complete specific courses in education, were "bankrupt."[8]

In the 1950s, historian Arthur Bestor called teacher preparation "a fraud upon the teachers themselves and upon society as a whole."

Nonetheless, people who wish to be teachers in our public schools are still required to take courses that many deem useless. A researcher who recently interviewed a group of teachers-to-be noted that none of them objected to being pulled out of classes in education in order to answer his questions. "They agreed," the researcher reported, "that the classes didn't matter much."[9]

How is it that we have so long prepared our teachers

in ways that so many find inadequate? Part of the answer lies in the way teacher education evolved in the United States. The nineteenth-century academies and normal schools that provided the first programs for prospective teachers grew up outside the American college system. Liberal arts faculties had little interest in teacher preparation; and even when normal schools transformed themselves into colleges, and even when colleges and universities introduced education curricula, coursework aimed at preparing teachers remained apart from other programs.

Separated from the rest of the higher education enterprise, education faculties advanced the idea that theirs was a separate discipline with a distinct body of knowledge. The courses that came to comprise the teacher education curriculum did little, however, to make that body of knowledge seem substantial. A survey conducted in the 1930s showed a high level of discontent with education courses on the part of noneducation faculty members, who said that separate courses in education were a waste and that future teachers could better spend their time in general studies or in study of the subjects they would teach. But complaints were of no avail. By the time of the survey, most states had made courses in education mandatory for certification. The idea of education as a unique discipline that all who would teach should study had been institutionalized in the most powerful way possible: It had been given the force of law.[10]

Textbooks used to teach education courses today show why there is frequent discontent with the way teachers are prepared.

Textbooks used to teach education courses today show why there is frequent discontent with the way teachers are prepared. Attempting to make a little material go a long way, the writers of these textbooks typically parse the subject matter finely so that it can be presented in different ways on different but nonetheless repetitious lists. What is simple is made complicated. Suppose a teacher wants to show children how to use the directory that is on the front page of most newspapers. According to one textbook, there are *twelve* different steps involved in teaching and applying such a skill.[11]

Borrowing subjects from fields in which they are not expert, textbook writers often reduce subtle interpretations to arbitrary categories. They tell future teachers that there are exactly *four* types of thinking or *three* ways of developing concepts. Controversial—even obviously incorrect—ideas are made to appear as though there were no debate about them. Setting a good example, one textbook declares, is not an effective way to teach values.[12]

The courses informed by such textbooks are more likely to confuse and mislead than to enlighten; moreover, the time spent in these courses is time that cannot be spent studying history or mathematics, physics or French—the subjects that teachers teach. A survey of seventeen Southern universities showed that prospective teachers—even those who majored in a content area (as opposed to education)—earned fewer credits in their majors than did other arts and sciences graduates.[13] Those who planned to teach a subject, in other words, studied it less than those who did not.

The nation has, despite the tyrannical machine, produced many fine teachers, thousands upon thousands of knowledgeable, skilled, and dedicated men and women. But the way we prepare teachers may well keep many bright people from entering the profession. Other factors are also important, but having to take courses that are intellectually demeaning no doubt helps discourage academically talented students from wanting to become teachers. A study reviewing a decade of research on the academic qualifications of prospective teachers concluded that between 1976 and 1986 the number of talented students intending to become teachers declined.[14] More recent data reveal some progress but continue to suggest a shortage of high-quality students among those interested in becoming teachers.[15]

Between 1976 and 1986 the number of talented students intending to become teachers declined.

The academically talented have also tended to leave the teaching profession in disproportionate numbers.[16] Again, there are no doubt many explanations; but one may well be that there are so few opportunities for teachers to renew themselves intellectually. "I'm embarrassed to admit it," observes Patrick Welsh of T.C. Williams High School in Alexandria, Virginia, "but in the English department at T.C. I cannot remember a time in the last ten years when we have discussed how to teach drama, poetry or writing—the stuff of life for English teachers."[17]

Teachers are commonly expected to participate in some kind of continuing education, but the "in-service" courses their schools and school districts offer seldom provide the valuable experience Welsh had in mind. Typical in-service classes in Baltimore, Maryland, are "Interaction: Human Concerns in the Schools" and "Creative Teaching Strategies." A recent report noted that grades are not given in the Baltimore classes and that few, if any, texts or papers are assigned.[18] In Fairfax County, Virginia, teachers were recently encouraged to take in-service training in which they

studied such topics as "withitness" and "subparameters of momentum."[19] A North Carolina educator reports that teachers in the Charlotte-Mecklenburg school district study the twenty-eight characteristics of "effective teaching"—which they are then expected to demonstrate in each lesson.[20] Small wonder that across the nation, teachers use the phrase *in-service* in the passive ("we were in-serviced")—as though something rude and unpleasant had been done to them.

Some organizations, including the National Endowment for the Humanities, offer alternatives. With NEH support, for example, teachers in Chicago are studying the ancient civilizations of Greece, Egypt, and Mesopotamia; teachers from rural Alabama are studying the Constitution and constitutional history. Teachers from across the country are studying Shakespeare at the Oregon Shakespeare Festival while others are meeting at Columbia University in New York City to read classic texts from the Islamic tradition.

One of the most heartening developments of recent years has been the critical eye that education professionals themselves have cast on teacher preparation.

One of the most heartening developments of recent years has been the critical eye that education professionals themselves have cast on teacher preparation. A recent study by John Goodlad and others at the University of Washington's Center for Education Renewal offers specific recommendations for change, including a better grounding of the entire teacher education curriculum in the realities of school practice. Emphasizing "teachers as educated persons," Goodlad and his colleagues stress the importance of what prospective teachers study outside departments and colleges of education, particularly in general studies.[21] When prospective teachers are able to earn their bachelor's degrees without studying history or science or mathematics—as they, like other undergraduates, all too commonly can—they may well enter the classroom with gaps in general knowledge that will make them less effective teachers.

The importance of a liberal education for all teachers has been affirmed both by the Holmes Group, composed of deans of education at research universities, and the Carnegie Forum's Task Force on Teaching as a Profession. In 1986 reports, both groups argued for eliminating the undergraduate education major so that prospective teachers could spend their undergraduate years becoming both broadly educated and thoroughly knowledgeable about the subjects they would teach.[22] In a 1990 report, the Holmes Group advocated partnerships between colleges of education and public schools. In teacher preparation programs

extending beyond the bachelor's degree into a fifth year or more, prospective teachers would learn by interning in the schools to "intertwine the wisdom of theory and practice."[23]

The Association of American Colleges has argued that teachers' education can be effectively combined with liberal arts education in four-year plans. Describing new programs at eleven schools, large and small, public and private, the 1989 AAC report, *Those Who Can*, offers models of integrating professional preparation with undergraduate study of the liberal arts. The University of Tulsa, for example, abolished its College of Education in 1985 and placed its teacher education program in the College of Arts and Sciences, where it is built around the core curriculum required of all Tulsa students.[24]

The crucial question, whatever the particular form of a program, is whether it is of real value to those enrolling in it. Are its graduates better teachers for having completed its courses? A national program of certification, such as the one being planned by the National Board for Professional Teaching Standards, could provide a way of judging. The board is developing assessments of the knowledge and skills necessary for successful teaching. Any person with a bachelor's degree and three years of teaching experience either in private or public schools will be able to become a candidate for assessment and thus for certification.[25] Because no particular form of professional preparation will be a prerequisite, the assessments could help determine whether four-year programs or ones that take five years or more are superior. The assessments might allay or confirm the suspicion that many have long held: that it is possible to become a superior teacher without participating in any formal program of preparation.

In New Jersey more than 1,500 teachers have been hired through an alternative program. The result has been greater diversity and increased quality.

The National Board for Professional Teaching Standards has yet to develop its assessments and have their effectiveness judged. Meanwhile, however, a number of new programs have been put into place that offer alternatives to traditional teacher preparation. The most innovative of these alternative routes provide ways for college graduates to become teachers through programs that emphasize classroom experience and compress the time spent studying pedagogy.

In New Jersey, the state that has led the way in alternative certification, more than 1,500 teachers have been hired through an alternative program. The result has been greater diversity and increased quality. More than 22 per-

cent of these teachers have been minorities—double the percentage in the regular teaching force. The alternatively certified teachers have consistently scored higher on the National Teacher Examination than teacher education graduates, and they have stayed in the profession longer.[26]

The statistics are impressive but so are the individual stories. In 1983 the music courses at Ridgefield Memorial High School in New Jersey were abolished because students were not interested in taking them. That was before Ann Crawford, a music teacher who did not have an education degree, came to Ridgefield through the alternative route. Now, according to the *New York Times*, "Her music classes are so popular that many of the most hardened students are signing up for them."[27]

Many of those who enter teaching through an alternative route are changing careers, and their presence in the teaching force adds another dimension of diversity. Among the teachers hired in the New Jersey program are a banker, a brain researcher, and a Marine Corps commander. In its first year, Connecticut's alternative certification program attracted several journalists, three lawyers, and a physicist.[28]

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Such teachers bring a rich variety of experience to the classroom—and a discerning eye to the programs that prepare them for teaching. In a Rand Corporation report on alternative certification, those enrolled in alternative programs repeatedly praised their practical aspect. "The program gets you into the classroom where you are needed and where you really learn to teach," said one. Theory unrelated to practice was repeatedly condemned while being able to observe excellent teachers at work and to teach under their supervision was cited time and again as valuable.[29]

Teaching, to hear these new teachers tell it, is not a subject one learns about in the abstract but an art that one learns from watching good teachers and from practicing with them. Some alternative certification plans hew closer to this model than others; in fact, as a 1990 study from the National Center for Education Information makes clear, many alternative plans are options in name only and require candidates to fulfill all the traditional requirements.[30]

But truly innovative programs do exist now in states like New Jersey, Connecticut, and Texas. These programs provide a basis for making judgments about the most effective ways of preparing teachers; they encourage colleges of education to improve their programs in order to compete; and for those who would be teachers, they provide a different path from the one dictated by the tyrannical machine.

Textbooks

Many of the textbooks used in American schools are so dull that no one would read them voluntarily. Observers have been commenting on the bland nature of American textbooks since at least the 1950s,[31] but their criticism has managed to change the situation only marginally. We continue to teach reading with basal readers that make the very idea of books seem boring. We continue to teach history with textbooks that drain all drama out of the past.

So much behavior hindering rather than serving the purposes of education signals the presence of a tyrannical machine. What is it, and how can we counter its effects?

Textbook analyst Harriet Tyson-Bernstein has noted that bad textbooks are often the result of good intentions.[32] Readability formulas, for example, were devised many decades ago with the admirable aim of helping children learn to read more easily. But arbitrarily limiting vocabulary and sentence length, as the formulas do, may leave children wondering why they should bother to learn to read at all. A textbook adaptation of Hans Christian Andersen's *The Nightingale*, for example, leaves out vivid details: the Chinese emperor's golden throne and porcelain palace, the silver bells that grow in his garden, the shining jewels that decorate a mechanical nightingale he is given.[33] Omitting such details simplifies vocabulary but also eliminates the challenge of words like *sapphire*. And it results in writing that is flat and dull.

Many of the textbooks used in American schools are so dull that no one would read them voluntarily.

A textbook adaptation of Ruth Adams's *Fidelia* leaves out the high point of the story, presumably because it comes in relatively long and sometimes complicated sentences with unfamiliar words. Second-grader Fidelia Ortega has longed for a violin, even tried building one for herself when everyone told her she was too small for such an instrument. And then one day her teachers, Miss Toomey and Mrs. Reed, give her a violin that is perfect for her. Here is how Ruth Adams tells it:

> It fit Fidelia exactly right.
>
> She knew by the way the smooth black chin rest cradled the corner of her jaw.

She knew by the way her elbow crooked neatly under the shining body of the violin exactly where it should.

She knew by the feel of the neck resting on her thumb . . . not too light, not too heavy.

She knew by the way her fingers curled over the fingerboard.

And she knew by the smiles worn by Miss Toomey and Mrs. Reed.

Most of all she knew by the smile in her own heart.[34]

In the textbook adaptation, all of this becomes, "It fit Fidelia exactly right."[35] The satisfaction that Fidelia's persistence brings, which is the point of the story, is not conveyed. Reading that has been made too simple has become reading that is unrewarding.

Textbooks come to seem like glossaries of historical events—"compendiums of topics," in the words of one report.

Another admirable goal that textbook publishers have set in recent years is to include more women and minorities—groups that were not given sufficient attention in the past. All too often, however, textbooks include individuals from these groups only by "mentioning" them rather than by giving a full account of their lives and contributions. In one American history textbook, for example, a portrait of Phillis Wheatley appears. The caption identifies her as a poet who was once a slave and tells us that George Washington admired her work, but the text adds little else.[36] How did she become a poet? How did she gain her freedom? How did she live, and how did she die? The details that make the chronicle of a life compelling are not here.

Major and minor events are also "mentioned" as textbook publishers try to satisfy the content requirements of various states. Does North Carolina want the Battle of Moore's Creek Bridge included? In it goes for students from every state to read about.[37] The necessity to include so much means that little attention can be paid to context. Textbooks come to seem like glossaries of historical events—"compendiums of topics," in the words of one report.[38] Military engagements and scientific discoveries and technological breakthroughs all float free, unmoored from what came before or after. An analysis of how several textbooks present the building of the transcontinental railroad showed that not one adequately explained the causes or consequences

of this massive national commitment of wealth and effort.[39]

An additional factor making textbooks less interesting than they might be is the avoidance of controversy. Subjects full of passion and drama—and potential trouble for publishers—are often avoided. During the 1980s, groups ranging from People for the American Way to fundamentalist religious organizations objected to the failure of textbooks to treat religion—or even mention it. They rightly pointed out that to present the crusades or the pilgrims or the civil rights movement without talking about religion is to present them falsely.[40]

It was also widely acknowledged during the 1980s that textbooks often fail to give sufficient attention to the story of how democratic institutions have evolved. What ideas gave rise to them? What historical circumstances nurtured them? How can they be preserved? Historian Paul Gagnon has noted how basic ideas of democracy are either left out or only feebly suggested in widely used world history texts. Accounts of Magna Carta, for example, are inexcusably brief. "Most texts devote twice as much space to the quarrels between popes and German emperors," Gagnon writes.[41] As Gagnon and others have made clear, the story of democracy is crucial for citizens of a democracy to know; and in a society as diverse as the United States, it provides a unifying core of values. "Unlike many other peoples," historian Kenneth Jackson observes, "Americans are not bound together by a common religion or a common ethnicity. Instead, our binding heritage is a democratic vision of liberty, equality, and justice."[42]

Textbooks often fail to give sufficient attention to the story of how democratic institutions have evolved.

There are good textbooks, but all too often those that are written with insight and skill are not the ones used in the classroom. The reason is relatively simple: Textbooks are frequently chosen without being read.

Over the course of almost a century, textbook selection has become institutionalized in committees. In the name of fairness, these committees try to make the selection process objective, usually by devising checklists of easily verifiable items. Roger Farr and Michael Tulley, who gathered more than seventy adoption committee checklists, report that the single question common to all was whether the book under review had a recent copyright date.[43] The object is to make sure the book is current, but the effect is to encourage publishers continually to issue new editions—that sometimes vary little from older ones.

Criteria often have little to do with content or with quality of writing. A checklist used in Iowa, for example, asks:

> To what extent are graph and chart skills stressed?
>
> To what extent is the table of contents adequate?
>
> To what extent is there an index?
>
> To what extent is there a glossary?
>
> To what extent does each chapter have a clearly visible summary paragraph?

Even under the heading of general content, the Iowa checklist asks questions that are far removed from the matter of whether this would be a good book to read:

> To what extent is there quality in drawings, illustrations, and the use of color?
>
> To what extent are the illustrations, graphs, and charts up-to-date?

One way to get better textbooks into classrooms is to devise better criteria, ones that actually require reviewers to read the books.

There are dozens of such questions on the Iowa checklist; and, as Farr and Tulley note is common, all are made to seem of equal weight. The extent to which each chapter has "section reviews" is as important as the extent to which "the information contained in the text [is] based upon accurate and current data."[44]

One way to get better textbooks into classrooms is to devise better criteria, ones that actually require reviewers to read the books. The state of California has recently devised guidelines for textbook selection that call for far more than a mere skimming of materials and an analysis of mechanics. Language arts textbooks are to be judged according to whether they are "literature-based and [engage] all students in materials in which values such as truth, justice, and compassion . . . are encountered as they read and respond to classical and contemporary works of literary merit." The new guidelines, first used in March 1988, give highest ranking to textbooks in which "there is no use of readability formulas."[45]

History textbooks in California are to be judged by such matters as the following:

> Materials are such that students will read them with interest, enthusiasm, and pleasure. The writing . . . is vivid and dramatic without sacrificing accuracy. It incorporates human interest wherever possible, so that students will recognize the universal humanity of people of other times and places and see these people in relationship to their own lives. Whatever the story to be told—the forming of a new nation, the collapse of an ancient civilization, the clash of a nation's people in civil war—the story has continuity, narrative coherence . . ., an element of suspense, and other qualities of well-written history based on the best recent scholarship.

The California guidelines build upon several years' effort by teams of experts to revise the state's curricula.

The California guidelines ask evaluators to consider the extent to which "textbooks and other instructional materials are accurate and truthful in presenting controversies in history" and the extent to which they "reflect the importance of religion in history" and "the significance of civic values and democratic institutions."[46]

The California guidelines, so different from those used almost everywhere else in the United States, were not easy to create. They build upon several years' effort by teams of experts to revise the state's curricula. The new guidelines hold the promise, however, of providing a way for adoption committees to select books that are honest and accurate—and that students might actually want to read.

Also useful for encouraging a careful consideration of textbook content and style is the work of the American Textbook Council, a national consortium with headquarters in New York City. Several times a year the council publishes thorough reviews of social studies textbooks. The spring 1990 issue, for example, considered twelve leading world history and geography textbooks and reported on how well they prepare students to understand recent events in Eastern Europe and the Soviet Union.[47] Whether textbooks are being adopted by statewide committees, as in California, or by groups at the local level, as they are in many states, such reviews can be an important source of information.

For almost as long as there have been textbooks—and

complaints about them—there have been suggestions that they be done away with, or at least not relied upon so much. It is often suggested that teachers use source materials instead, that they teach with poetry, short stories, biographies, speeches, and documents. Many teachers do undertake such efforts on topics they know well, but few have the time or resources to treat every topic this way.

The National Center for History in the Schools, a cooperative effort of the National Endowment for the Humanities and the University of California at Los Angeles, is trying to expand opportunities for teachers to use primary sources. The center has reviewed hundreds of curricular units that present original materials and has described fifty in an annotated bibliography that it is making available to teachers nationwide.[48] In addition, the center has brought together outstanding teachers and scholars to develop curricular units on subjects such as the ancient Near East, China under the Han dynasty, and America in colonial times. Available beginning in the fall of 1990, these curricular units contain background materials, lesson plans, and primary sources. The unit, "The Golden Age of Greece," for example, includes maps of Marathon and Thermopylae and Herodotus' account of the battles there; illustrations of the Athenian agora and its surroundings; architectural drawings of the Parthenon and the Erechtheum; and texts of Sophocles' *Antigone*, Pericles' funeral oration, and Plato's *Apology*.

Using source materials, students can learn how to learn without textbooks.

With such materials students can learn how to learn without textbooks. They can come to know the pleasure of hearing the voices of the past—instead of only hearing about them.

Tests

"When some people become targets of criticism . . .," observes Gerald Bracey, director of research and evaluation for the Cherry Creek School District in Colorado, "they seem to prosper . . . We often say such people 'feed on criticism.'" The Scholastic Aptitude Test (SAT), Bracey argues, is like those people: "Over the last decade, it has certainly been the target of unremitting attack, and it has continued to thrive."[49]

Such resilience is a primary characteristic of tyrannical

machines, and the SAT seems an almost classic example of the syndrome William James described. At the time the SAT was devised in the 1920s, it seemed to fill an important need. Previous college entrance examinations, focusing on subjects—and even specific works—studied in elite secondary schools, were thought to put students from other high schools at a disadvantage. What if a student hadn't read *Lycidas*, a work that those taking college entrance examinations in 1901 were expected to know? Could a test that asked for an analysis of Milton's elegy be a fair appraisal of how well that student would do in college? Wouldn't it be better to detach the entrance examination from the high-school curriculum? Wouldn't it be fairer to ask students to identify antonyms, to complete sentences, and to answer questions about given passages, thus testing for ability rather than achievement?[50]

A modest success at first, the SAT began to flourish after World War II. As thousands of G.I.'s decided to go to college, the SAT provided a fast and presumably reliable way of sorting them out.[51] In the decades since, the test has continued to grow until today it is a centerpiece of our educational system. Millions of dollars are spent preparing for the SAT; scholarship money is awarded according to the results; students across the nation are admitted or denied entrance to the college or university of their choice depending on how they do.

The SAT seems an almost classic example of the syndrome William James described.

Not only do institutions of higher education rank students by their SATs, they in turn are ranked by them, their status going up or down depending on the average scores of the incoming class. Secondary schools are judged by SATs: Local housing prices rise and fall; principals and superintendents are hired and fired; and the entire nation reaches conclusions about the state of American education.

The very nature of the SAT is a weakness when so much depends on it. The idea that the specifics of what you have learned do not matter becomes a perverse message when it reverberates loudly throughout the system. Schools teach to the test—as they would to any examination so important. But what teaching to the verbal component of the SAT means is that instead of discussing Langston Hughes's poetry or F. Scott Fitzgerald's novels, students are practicing the skills that the SAT tests for. "My English class for six years consisted almost exclusively of vocabulary lists, editing exercises, and reading comprehension drills," a graduate of a prestigious public high school has observed.[52]

Tens of thousands of students enroll each year in SAT coaching courses, with many spending more than $600 apiece. Students in other nations, most notably Japan, also enroll in cram courses for examinations; but there is an important difference. Japanese students are learning what they need to know in order to paraphrase the figurative language of *The Tale of Genji* or to describe the history of Afghanistan's foreign relations.[53] American students are learning to manipulate analogies and identify antonyms. As one SAT preparation book puts it, "We're not going to teach you math. We're not going to teach you English. We're going to teach you the SAT."[54]

So much testimony to the effectiveness of coaching undercuts the idea of the SAT as an instrument of equity. Where students go to high school and what they study makes a difference in how they do on the examination. Instruction matters; and since that is so, why not direct that instruction toward knowledge and understanding of the subjects that make up school curricula?

"We're not going to teach you math. We're not going to teach you English. We're going to teach you the SAT."

It might be argued that a test of what students have learned—an achievement test—would be too controversial. How could the questions in history ever be decided? Would they be about political or social history, about Western civilization or Third World cultures? How could a national curriculum be avoided if we have a content-based national examination? An effective counter to all these questions is the fact that the College Board already gives achievement tests to hundreds of thousands of college-bound students every year with a minimum of controversy—and no national curriculum in sight.

There are additional criticisms lodged against the SAT. Some maintain that it is biased as to race and gender. Others argue that the predictive edge that it offers to colleges and universities is too small to justify the examination. Still others maintain that the SAT serves no useful purpose for many students who take it because they go to schools that are insufficiently selective for SAT scores to make a difference.[55]

But even were all these criticisms to be answered conclusively, the fact would remain that we measure our students and our schools with an examination that tries to avoid assessing what students have learned about history, literature, and other subjects.[56] The United States alone among industrialized nations has at the center of its educational system a test that tries assiduously to be curriculum free.

To its credit, the College Board emphasizes that it is an error to evaluate schools by using an examination meant to predict how students will do in college. What about students who do not intend to go to college, for example? Since they do not take the SAT, we learn nothing about them. Despite such objections, educators, policymakers, and the public find using the SAT to compare school districts and states almost irresistible since there are so few alternatives.

The National Assessment of Educational Progress (NAEP), with authorization from the Congress, regularly tests a nationally representative sample of nine-, thirteen-, and seventeen-year-olds to assess what they have learned in subjects ranging from mathematics to history. In 1987 a blue-ribbon panel recommended that NAEP be expanded and that it provide not only national scores but also state-by-state figures that could be further broken down.[57] In this way, states and localities would have achievement scores to compare. What students had learned would become a key to rankings—as it should be.

State participation in an expanded NAEP is entirely voluntary, and as yet only thirty-seven states are part of the project. Moreover, current law forbids any breakdown of scores below the state level. Nonetheless, an expanded NAEP offers the best possibility for giving parents and policymakers a meaningful measure of educational progress—and for discouraging use of the Scholastic Aptitude Test as a measure of our schools. A recent decision by the governing board of NAEP to set achievement levels for the assessment will further increase its value. Under the new plan, NAEP will not only report what fourth-, eighth-, and twelfth-graders know, it will also reveal what percentages have achieved basic, proficient, or advanced achievement levels. As the former chairman of the NAEP governing board, Chester E. Finn, Jr., describes it, the new policy "finally brings into view the day when we will know not only how well our children are learning but also how many of them are learning as well as they *should* be."[58]

An expanded NAEP offers the best possibility for giving parents and policymakers a meaningful measure of educational progress.

A few colleges and universities have taken steps to diminish the dominance of the SAT over the lives of individual students. In recent years, Middlebury College in Vermont, Union College in New York, and Bates College in Maine announced they would no longer require the SAT. Said a representative of Union College, "We just got very dismayed at the amount of emotional energy being devoted to SATs by students and their parents." A Bates College

representative noted. "We wanted youngsters, instead of spending 400 hours studying word analogies . . . to take advanced placement calculus, to read everything Thomas Hardy wrote, to captain the soccer team . . . to work in a soup kitchen."[59]

A number of states have begun testing programs to counteract the dominance not only of the SAT but also of standardized, multiple-choice tests generally. On a recent statewide assessment, eleventh-graders in Maine were asked to analyze a satellite photo of Charleston, South Carolina, and to answer an open-ended question about Georgia O'Keefe's painting, "Cow's Skull—Red, White and Blue."[60] Twelfth-graders in Massachusetts were asked to give three recent examples of the constitutional system of checks and balances at work and to explain them. The Massachusetts example shows how different a picture can emerge when one moves beyond standardized assessment—and beyond the SAT in particular. Massachusetts ranked sixth out of twenty-two states in its 1989 SAT scores, a fact that might allow Massachusetts citizens to think its students were doing well enough. But only 3 percent of Massachusetts high-school seniors could fully answer the checks-and-balances question, surely cause for concern.[61]

Depending on the changes finally implemented, the SAT may prove to be a machine capable of helping to counter itself—by reinventing itself in more beneficent form.

California recently began assessing a variety of writing skills by having students write forty-five-minute essays at grades eight and twelve. History and social science assessments may soon include evaluation of debates and dramatic presentations.[62] Vermont plans to evaluate students' writing skills by having trained teachers judge both a timed writing sample and an example of the student's revised work. School writing programs will be evaluated by having trained teams review student writing portfolios.[63]

Meanwhile, the College Board is considering ways that the SAT can be improved. It is, for example, field-testing versions of the verbal assessment that are more like some of the achievement tests that the College Board administers and that ask for written as well as multiple-choice responses.[64] Depending on the changes finally implemented, the SAT may prove to be a machine capable of helping to counter itself—by reinventing itself in more beneficent form.

Choice

When there are alternative ways to become a teacher or to choose textbooks or to assess students—and when people know about them—it is more difficult for outmoded and unsatisfactory methods to dominate. Healthy competition is anathema to tyrannical machines.

In recent years, political leaders and school reformers have argued that schools themselves need to compete. Allowing students and their parents to *choose* a school, rather than being assigned to one, encourages schools to work to attract students—and the funding that goes along with them. Good schools with strong programs will prosper under such a plan. Unsuccessful schools that no one wants to attend will either reform themselves or be forced to close.

Some people have always had a right to choose their children's schools. Parents who can afford to send their children to private schools or to move into good school districts have long exercised "choice." As education consultant Ted Kolderie describes it, "Choice exists. It is simply means-tested. You have choice if you have money."[65] The current choice movement would extend choice to everyone, giving families without private resources an opportunity to seek out better education. Observes Seymour Fliegel, who developed and supervised a highly regarded choice program in District 4 in New York City, "What is good for the children of the wealthy generally speaking would do very nicely for the children of East Harlem, and that includes choice."[66]

Choice offers incentive and equity, and those alone give it powerful appeal; but just as important, choice is effective. Mary Anne Raywid of Hofstra University, who has spent a decade studying choice plans, cites dozens of studies showing that allowing families to select from among public schools increases academic achievement, graduation rates, and parental involvement.[67] There are choice success stories from Cambridge, Massachusetts, to Richmond, California; but none is more dramatic than the tale of East Harlem's District 4. In 1973 District 4 ranked thirty-second out of thirty-two New York school districts in reading and math. After a choice plan was introduced, the district began to rise in the rankings and since the early 1980s has been sixteenth or seventeenth every year. So successful has choice been

Unsuccessful schools that no one wants to attend will either reform themselves or be forced to close.

in District 4 that youngsters from throughout New York City are choosing to attend its schools.[68]

"Almost without exception," President George Bush has noted, "wherever choice has been attempted . . . choice has worked. Any school reform that can boast such success deserves our attention and effort."[69] Eight states have adopted statewide plans; and many others are considering them, as are scores of local districts. One of the nation's most interesting choice plans is in Milwaukee. It allows 1,000 inner-city youngsters to choose either public or private nonsectarian education, with the state paying up to $2,500 in tuition costs. The result of a bipartisan effort by Republican Governor Tommy Thompson and Democratic legislator Polly Williams, the Milwaukee plan has aroused opposition; but it has also won strong support. As Mikel Holt, editor of the *Milwaukee Community Journal*, Wisconsin's largest-circulation African-American newspaper, points out, the private schools that have agreed to participate in the program do a better job of educating students than do their public counterparts. Why not let parents and students choose them?[70] Both Mikel Holt and Polly Williams also emphasize the sense of ownership that choice gives to parents. "If we can empower poor people to decide for themselves," Williams says, "that's going to involve them in the schools in a whole new way."[71]

Control of the kind that parents exercise when they make choices allows schools to perform well.

In what may be the year's most influential book on education, *Politics, Markets, and America's Schools*, John Chubb and Terry Moe show how parental choice encourages schools to perform effectively. Typically, control of the schools comes from the top down: from school boards, superintendents, and district and state bureaucracies. Well-intended though it may be, such top-down control becomes the tyrannical machine that keeps schools from becoming effective. It is bottom-up control of the kind that parents exercise when they make choices that allows schools to perform well.

The reason has to do with autonomy. In an exhaustive analysis of data, Chubb and Moe demonstrate that school autonomy is the single most important factor in the emergence of characteristics typical of effective schools: characteristics such as a clear sense of mission, an emphasis on rigorous academic standards, and teacher participation in decision making. With bureaucracies as the governing mechanism of the schools, autonomy is difficult. With choice, autonomy is encouraged—and so, therefore, is effective school performance.[72]

Schools that are autonomous can develop different specialties. Among the junior high schools in New York's District 4, for example, are the Academy of Environmental Science, the East Harlem Performing Arts School, the Isaac Newton School for Math and Science, and the School of Science and the Humanities. In Prince George's County, Maryland, a student might choose an elementary school that specializes in the arts, a middle school that stresses humanities, a high school oriented toward sciences. Or students might choose the comprehensive program at a neighborhood school. Alternatives do not necessarily have to be innovative in order to be attractive. The Bay Haven School of Basics Plus, an elementary school in Sarasota, Florida, emphasizes traditional values and skills—and has a waiting list of more than 1,000 students.[73]

While schools of choice are often quite different from one another, successful choice plans typically have traits in common. Regulations ensure that choice, which has often been introduced as a method to desegregate schools, does not work to upset racial balances. Attention is paid to the matter of transportation within reasonable limits. Both Montclair, New Jersey, and Cambridge, Massachusetts, for example, provide transportation for students living more than a mile from the schools they choose. In successful choice plans, there are also active efforts to make sure that students and parents understand what their alternatives are. In New York's District 4, an extensive orientation program for students begins in sixth grade. In Cambridge, Massachusetts, "parent liaisons," operating out of a parent information center, discuss student needs and school characteristics with parents and help with the application process.

By bringing the dynamic of competition into education, choice encourages schools to make needed improvements in all areas.

Choice is one of the most interesting and innovative reforms of the 1980s, and it is, in an important way, unique. As Chubb and Moe put it, choice "has the capacity *all by itself* to bring about the kind of transformation that, for years, reformers have been seeking to engineer in myriad other ways."[74] By bringing the dynamic of competition into education, choice encourages schools to make needed improvements in all areas—from teachers and textbooks to standards and expectations. "Schools that compete for students, teachers, and dollars," the National Governors' Association notes, "will, by virtue of the environment, make those changes that allow them to succeed."[75]

Choice can help bring about a host of important reforms, but that does not mean it should be the only item

on the reform agenda. Alternative certification, by opening up the ways in which an individual can become a teacher, can bring business executives, scientists, and artists into schools of choice. Better textbooks and teaching materials as well as better ways of selecting them can mean a wider range of resources for teachers in schools of choice.

Continued concern with testing is important as well. Particularly as we increase the variety and autonomy of schools, we will need measures of both individual and institutional progress—standards of comparison based on what we want our children to know and be able to do.

Critics of choice are fond of saying that it is not a panacea, and they have a point; nevertheless, simply because of the forces it sets in motion, choice does have primacy among reforms. It is, as well, a change that seems long overdue. Milwaukee's Polly Williams points out that only a foolish person keeps sending money and patients to a doctor whose treatments do not work; why, then, do we keep sending money and children to ineffective schools? People have the right to get a second opinion, Williams says; similarly, she notes, they ought to have the right to choose for their children a different and better education.[76]

Colleges and Universities

Research and Teaching

For decades critics have been saying that institutions of higher education do not do enough to encourage good teaching. Classicist William Arrowsmith made this point in 1967, observing that "at present, the universities are as uncongenial to teaching as the Mojave Desert to a clutch of Druid priests."[77] Almost a quarter century later, historian Page Smith asserts that faculties "are in full flight from teaching. . . . In many universities, faculty members make no bones about the fact that students are the enemy. It is students who threaten to take up precious time that might otherwise be devoted to research."[78]

This situation has not come about because faculty members necessarily prefer research. In a recent survey, 71 percent reported that their interests either leaned toward or lay primarily in teaching.[79] But the road to success—or even to survival—in the academic world is through publishing. Anthropologist Bradd Shore notes, "If you fail at the teaching and fail at the service but still do terrific scholarship, you are likely to get tenure," but not the other way around.[80] A senior literature professor, who himself publishes actively, reports that "the way one prospers is by finding time away from teaching to get one's own work done."[81] Philosopher Thomas Flynn relates the advice he received as a young assistant professor trying to get tenure: "Beware of the students. They will destroy you."[82]

The most dramatic examples of how research is valued over teaching occur when faculty members who have won campuswide awards for teaching suddenly find themselves

A senior literature professor reports that "the way one prospers is by finding time away from teaching to get one's own work done."

without jobs. A 1988 article in *The Chronicle of Higher Education* even raised the possibility that teaching awards, by implying that a faculty member is not as serious about research as he or she should be, are "the kiss of death" as far as achieving tenure is concerned.[83] Economist Thomas Sowell reports, "I personally know three different professors at three different institutions who have gotten the Teacher of the Year Award and were then told that their contracts would not be renewed."[84]

The emphasis on research is greatest at research universities where 64 percent of the faculty report spending five hours or less per week on formal classroom instruction and 86 percent report spending six or more hours per week on research. At liberal arts colleges, by contrast, only 16 percent of the faculty report less than five hours a week in the classroom; and 48 percent report spending six or more hours on research.[85] Even at liberal arts colleges, however, the emphasis on research is growing. Fifty liberal arts schools have banded together under the lead of Oberlin College and are considering calling themselves "research colleges." Schools such as Colorado College, Grinnell, and Wellesley have reduced the number of hours faculty teach so that they have more time to do research. A recent survey of twelve liberal arts colleges reported that faculty frequently distinguish between teaching and "what they often call, significantly, '*my own work*,' " or research.[86]

Even at liberal arts colleges, the emphasis on research is growing.

Faculty members often blame administrators for the emphasis placed on research, but administrators are responding to powerful external forces. The money that flows to their institutions and the prestige their schools enjoy will be largely dictated by the research those institutions do. Thomas Sowell points out that hundreds of millions of federal dollars flow into research at universities. "Money talks in academia as elsewhere," Sowell notes, "and what money says on most campuses is 'do research.' "[87] Emory University's Frank Manley observes that academic reputation is established through the public act of publishing, not through the more private act of teaching. "The people who have status outside the University, who are writing and publishing, are the ones who are going to get the status inside the University," says Manley. "They are the ones who are looked upon with most favor by the administrators because they are the ones who have the marquee value for the University."[88]

The model that increasingly drives all of higher education—the tyrannical machine that reigns—was first

established in the United States at the end of the nineteenth century. Derived from German universities, this model emphasized the production of knowledge rather than its diffusion. Both Daniel Coit Gilman and G. Stanley Hall, influential spokesmen for the new university ideal, thought that the scholar's proper role lay in producing "bricks" for the rising temple of knowledge.[89] William James was among the first to note that such a single-minded view threatened a system in which there were many paths to excellence. It was in a 1903 essay on the Ph.D.—the degree associated with the new, research-oriented university—that James coined the phrase "tyrannical machine."

Teaching Less

One of the most dramatic effects of emphasizing the production of new knowledge—that is, research that leads to publication—rather than the communication of knowledge to the next generation—that is, teaching—has been a decline in how much faculty members teach. At four-year institutions, time spent by faculty in the classroom has decreased steadily. According to one estimate, teaching responsibilities at noted research universities have, since 1920, decreased in many instances by one-third, and often by half to two-thirds.[90] As the president of York College of Pennsylvania, Robert Iosue, notes, it is difficult to be precise about the degree to which teaching responsibilities have declined because official teaching loads are often different from actual ones, which may be reduced for such work as service on a faculty committee. "In one bizarre case," Iosue says, "a professor received fifteen hours of reduction from an official work load of twelve hours. He was paid a three-hour teaching overload yet did not step inside the classroom."[91]

The gradually shrinking academic year also affects time faculty members spend in the classroom.

The gradually shrinking academic year also affects time faculty members spend in the classroom. In the late 1960s, according to an executive director of the American Association of Collegiate Registrars and Admissions Officers, most colleges had two seventeen-week semesters. Now, two fifteen-week semesters are more typical, with some schools in session as few as twenty-eight weeks—or half a year.[92] Observing that students in Missouri institutions of higher education now spend a semester and a half less in college than students in the 1940s, Governor John Ashcroft has asked the schools in his state to lengthen the academic year.[93]

Because the prestige of an institution depends on

whether it has a faculty well known for publishing, colleges and universities frequently raid other institutions for their research stars. "Hiring superprofessors," observes Lewis H. Miller of Indiana University, "is a quick and easy method of raising the value of one's academic stock."[94] The primary way of luring faculty from other institutions is to offer them reduced teaching loads. As Lee Knefelkamp of the American Association for Higher Education puts it, "Unfortunately, the blue chip that we play in the poker game these days is to offer our best scholars less time with students. The currency of higher education has become, in fact, less time with the constituency we are supposed to serve."[95] Professor Miller reports that when he was a dean, faculty members who visited his office to discuss offers they had from other institutions were almost always more attracted by the possibility of teaching less than the promise of earning more. "Although some of these colleagues were teaching just one or two courses a year," Miller writes, "they were being wooed by the prospect of a 50 percent reduction, even if that translated into teaching one course every other year."[96]

When faculty members teach less, there is a financial consequence.

When faculty members teach less, there is a financial consequence. Because more people must be hired to teach, the costs of education escalate—and so does tuition. Between 1980-81 and 1989-90, average tuition charges rose an inflation-adjusted 50 percent at public universities, 66 percent at private universities, and 57 percent at other private four-year schools. Other factors, including increased administrative expenses, account for some of these increases; but with instructional budgets typically comprising 40 percent of educational and general expenditures, the decline in the amount of time faculty members spend in the classroom clearly plays a role.[97]

Between 1977 and 1987, while the number of full-time arts and sciences students *decreased* by 14 percent, the number of full-time arts and science faculty members *increased* by 16 percent;[98] but it is hard to find evidence that instruction benefited. Instead there are reports of students unable to get into classes or to take the courses they want. At the University of Texas at Austin, after the English department reduced the teaching load by one-third, students stood in long lines in Parlin Hall, waiting, as the student newspaper put it, "for an English class, any English class, to open."[99] At Northwestern University, a student editorial complained about course offerings in history, noting that 20 percent of the department was on leave to do research and that none

of the four highly publicized, newly hired faculty members in the department was teaching.[100]

Even though the number of arts and sciences students has declined markedly and the number of faculty members has increased significantly, many institutions still find themselves short of teachers. They frequently fill in the gap with what has been called an "academic underclass"—part-time instructors. Part-timers, who in 1988 comprised 37 percent of faculty nationwide, are paid much less than full-time faculty. A survey of English departments showed the typical part-time faculty member earning $1,500 per course although there were examples of departments paying as little as $400.[101] Colleges and universities often cap the number of courses that a part-timer can teach so they will not have to pay fringe benefits. Thus many part-timers become "gypsy scholars," frantically commuting between teaching assignments at different institutions and frequently looking for other ways to supplement their salaries. Michael Shenefelt, a part-timer at New York University and Long Island University, reports that by supplementing his income as an office temporary, he is able to earn $20,000 a year. "A New York University elevator operator *begins* at $20,000," Shenefelt observes.[102]

Graduate students are another source of cheap labor for the classroom.

For Ph.D.-granting institutions, graduate students are another source of cheap labor for the classroom, one used extensively at some universities. A 1989 walkout of teaching assistants at the University of California at Berkeley is reported to have caused the cancellation of nearly 75 percent of classes.[103] Like part-time instructors, graduate students are often unsupervised; and while some manage to be excellent teachers without any orientation or opportunity to discuss their work with experienced faculty members, few find themselves rewarded for a job well done. In fact what graduate students learn, all too often, is that teaching is not worth doing well. Says Frank Manley of Emory University, "I left [Johns Hopkins] with the idea that my main job was to do research, write books, and neglect undergraduates, because otherwise they would take all my time. . . . My career has been in part an unlearning of what I learned in graduate school."[104] Jaime O'Neill of Butte College in Oroville, California, says that it took him "five years of adjustment to get over the snobbery of graduate school."[105]

Across the country are thousands of faculty members whose professional lives run counter to the prevailing culture

of academia. At a liberal arts college in the Midwest where a new emphasis on publication has led to a cutback in course offerings, a literature professor teaches as many courses as he possibly can to try to make up the shortfall. "I am permitted to teach on an unlimited basis," he says, "and I do. If I did not do this many students would not be able to take a literature course."[106] All too often, however, a decision to emphasize teaching exacts a price. At the University of Maryland, associate professor Maynard Mack, Jr., notes that his own focus on teaching "is not a fast track to that promotion. I should minimize my campus responsibilities and produce a second book."[107]

Nowhere is the countertrend to academia's current culture stronger than in community colleges. The mission of these institutions is clear. "We are a practical teaching college," in the words of one professor.[108] But in a system of higher education that does not place high value on teaching, community colleges rank low in prestige. Having less status than four-year colleges, they command fewer resources. Their faculty members earn less even though they teach more. The overwhelming majority of community college faculty spend more than eleven hours a week in the classroom; 10 percent spend more than twenty hours a week.[109] Many find year-round employment a necessity. "If you don't teach," says Evelyn Edson of Piedmont Virginia Community College, "you work at Shoney's [a fast-food restaurant] in the summer. You get some kind of job."[110] The result can be too little time to undertake the reading and reflection that make for better teaching, too little time to exchange ideas with other faculty members about issues in one's field or ways to improve courses and curricula.

Community college faculty members earn less even though they teach more.

Faculty Interests and Student Needs

The increased emphasis on research has resulted in a surge of publications. The number of books and articles published annually on Shakespeare grew by 80 percent between 1968 and 1988; the number on Virginia Woolf by 800 percent.[111] With so much being written, individual researchers find themselves having to take up narrower and narrower topics in order to find a niche. The consequences were apparent in the 1970s when Professor William Schaefer became editor of *Publications of the Modern Language Association*. Discovering a backlog of articles on exceedingly specialized topics, Schaefer developed a new editorial policy

emphasizing articles of "significant interest"; but PMLA, despite being one of the premier journals of the academic world, did not receive a sufficient number of articles of wider interest to sustain the new plan.[112]

Focusing on increasingly narrow topics is one way of achieving the originality that publication demands. Another, as Gerald Graff has noted, is proposing innovative interpretations. "The new wave of paracritical and metacritical improvisation in criticism . . . ," Graff wrote in 1979, "may be a necessary spur to industrial growth at a time when the conventional modes of professional publication have worn thin."[113] The importance of new theoretical approaches to scholarly publishing can be seen in journal article after journal article in which scholars write about "foregrounding," "appropriating," "inscribing," and "engendering." It can be seen in books. A historian, for example, takes up such topics as "The Semantics of Transcendence as a General Academic Code" and "Historiographical Rejection of Cultural Disengagement." Theory shapes the programs of professional gatherings. At the Modern Language Association's most recent convention, papers were given on "The Authority of Female Representation in the Postmodern Matrix," "Prosaics and Semiotic Totalitarianism," and "Narrative Dismemberment: Psychological Digressions in the Structure of Hypertexts." Members of the College Art Association are currently being invited to present papers on "Rethinking the 'Foucauldian' association of photography with the generalized 'panoptic' regime of truth and power."[114]

Focusing on increasingly narrow topics is one way of achieving the originality that publication demands.

It is not surprising that faculty would want to teach what interests them professionally, but the extent to which specialization and new theoretical approaches have affected curricula may well startle anyone who has not followed the collegiate course of study over the last few decades. A student can fulfill core requirements at Harvard by studying tuberculosis from 1842 to 1952, and distributive requirements at Dartmouth with "Sexuality and Writing," which analyzes "the use of sexuality and its ramifications as symbols for the process of literary creativity, with particular reference to . . . potency and creative fertility; marriage or adultery and literary sterility; deviation and/or solitude and autobiography; prostitution and history; chastity and literary self-referentiality."[115]

At the University of Minnesota, faculty in the humanities department recently proposed doing away with the ten

courses the department offers in Western civilization and substituting three new courses: "Discourse and Society," "Text and Context," and "Knowledge, Persuasion, and Power." In these introductory courses, students will analyze "ways that certain bodies of discourse come to cohere, to exercise persuasive power, and to be regarded as authoritative, while others are marginalized, ignored, or denigrated." More advanced courses are also being planned, including "Music as Discourse," for which the syllabus includes music video, a heavy metal concert, and songs sung at a workers' strike.[116]

Resistance from faculty in other departments as well as from students has led the humanities department to give up plans to abandon the Western civilization courses immediately. For the time being, the older curriculum will continue to be offered along with the newer ones. There is concern, however, about how long the Western civilization courses will last since the overwhelming majority of faculty members in the humanities department has little interest in teaching them.[117]

"We are graduating a generation that knows less and less," says Vassar sociology professor James Farganis.

A disgruntled student at Minnesota observes, "This is all because members of a department want to teach what they want to teach"[118]—which is not necessarily what undergraduates need to learn. A recent nationwide survey conducted by the Gallup Organization for the National Endowment for the Humanities showed that many students manage to approach college graduation with alarming gaps in knowledge. About 25 percent of the nation's college seniors were unable to date Columbus's journey within the correct half-century. More than 30 percent could not identify the Reformation. A majority could not link major works by Plato, Dante, Shakespeare, and Milton with their authors.[119]

"We are graduating a generation that knows less and less," says Vassar sociology professor James Farganis. In the absence of required, broad-based courses in which undergraduates study significant events and books, Farganis notes, "students are picking and choosing, making their own curriculum in a haphazard fashion."[120] Some students do not study American or English literature at all: It is possible to graduate from 45 percent of the nation's colleges and universities without doing so. Similarly, some undergraduates do not study history: It is possible to graduate from 38 percent of the nation's colleges and universities without doing so. At 41 percent of colleges and universities, it is possible to graduate without studying mathematics; at 33 percent,

without studying natural and physical sciences.[121]

Between 1968 and 1988, while the number of bachelor's degrees awarded in the United States grew by 56 percent, the number of bachelor's degrees awarded in the humanities fell by 39 percent. There have also been significant declines in mathematics and physical science majors during this period: down 33 percent and 9 percent, respectively. For the humanities (and for mathematics) the situation has improved in recent years, but the loss remains significant. Twenty years ago, one out of six college graduates majored in the humanities. Today the figure is one out of sixteen.[122] No doubt there are many explanations, but surely one is that many students come to college poorly prepared in the humanities—and in mathematics and physical sciences as well—and once in college, they do not take introductory courses that fully introduce them to the challenges and pleasures of these disciplines. How could an undergraduate who has never taken a meaningful course in history or physics choose to major in one of these fields?

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Those who do major in the humanities often find that their courses are not conceived as comprehensive treatments of important subjects but as preparation for graduate school. Even though most majors in subjects like English do not go on to work on Ph.D.'s, they may well spend time as undergraduates becoming familiar with critical theory—perhaps more time than they spend reading literature. "I strongly suspect," writes Professor Robert Alter of the University of California at Berkeley, "that many young people now earning undergraduate degrees in English or French at our most prestigious institutions have read two or three pages of Lacan, Derrida, Foucault, and Kristeva for every page of George Eliot or Stendhal."[123]

In graduate school, students prepare to publish and survive by narrowing their focus as much as possible—and by reading theory. Elizabeth Fentress, who went to graduate school because she wanted to concentrate on original works of literature, has written about her discovery that there was no way to earn an advanced degree without diving into a "tidal wave of theory." Rather than be diverted from her goal, she ended her graduate studies. "I deemed it best to leave . . . ," she writes, "and to learn what I wanted to learn on my own."[124]

Research interests affect teaching and learning at all levels of higher education, and they have an impact on schools as well. Among today's college students are tomorrow's

teachers; and if their curricula have been haphazard, they may well know less than they should about the subjects they will teach. If they have been taught in an indifferent fashion, they will be less likely to know how to teach well themselves. "The undergraduate education that intending teachers receive is full of the same bad teaching that litters American high schools," a group of education school deans observes. "If teachers are to know a subject so that they can teach it well, they need to be taught it well."[125]

Good Practices

It is a hopeful sign that leaders on campus have begun to talk about the need to restore a balance between research and teaching.

Education reform in colleges and universities has not yet attained the momentum of education reform in the schools; but it is a hopeful sign that leaders on campus, as well as critics off campus, have begun to talk about the need to restore a balance between research and teaching. Presidents Donald Kennedy of Stanford University, Harold Shapiro of Princeton University, William Chace of Wesleyan University, and Sheldon Hackney of the University of Pennsylvania have all spoken of the need to place greater value on teaching. Faculties on various campuses have reported candidly on the failings of undergraduate education and have recommended remedies. The Pease Report from the University of Maryland, for example, notes that "undergraduate teaching is seriously undervalued by the present reward structure" and recommends that departments recognize that "there are several important ways of serving the university and many years of outstanding teaching is one."[126]

A number of colleges and universities emphasize the importance of teaching by bringing faculty members together to talk about their courses. Those faculty teaching in the Contemporary Civilization sequence at Columbia University meet weekly to discuss course readings, examinations, paper topics, and strategies for teaching. Faculty members implementing the new humanities program at the University of Denver have been meeting regularly for the last three years to discuss texts, syllabi, and teaching methods. At Brooklyn College of the City University of New York, faculty members come together in summer seminars not only to discuss the college's curriculum, but also to practice teaching parts of it—in front of colleagues.

Good instruction is not just a matter of how faculty members teach; it is also a function of what is taught. Hence a substantial, coherent curriculum is central to the teaching mission. In every part of the United States there are projects aimed at improving the undergraduate course of study:

- Faculty members at institutions such as the University of North Texas, Hood College in Maryland, Saint Anselm College in New Hampshire, the University of Tennessee at Chattanooga, Dixie College in Utah, and Thomas Aquinas College in California have established rigorous and coherent curricula for undergraduates.
- The Association of American Colleges, through a grant from the National Endowment for the Humanities, is making it possible for faculty at twenty-seven institutions seeking to improve their undergraduate programs to work with mentors from institutions with successful core curricula.
- Similar opportunities are being made available to two-year colleges through another grant from the NEH. This project, administered by the American Association of Community and Junior Colleges, has brought faculty at forty-nine two-year institutions together with leaders of strong humanities programs at similar schools.
- The American Association for the Advancement of Core Curricula, formed in 1989, has held meetings that allow faculty members from around the country to discuss curricular reform.

A substantial, coherent curriculum is central to the teaching mission.

Some of the nation's most prestigious universities have focused on ways that graduate school practices affect teaching:

- Yale University has taken steps to decrease the use of teaching assistants and simultaneously to encourage graduate

students to earn Ph.D.'s more rapidly by offering fellowships for them to finish their dissertations. As a result, undergraduates will be more likely to encounter full-time faculty in their classrooms.

- The University of Chicago, in a program that pairs graduate students with experienced faculty who are teaching in the school's core curriculum, provides semester-long apprenticeships for teaching assistants. Chicago also has "Mellon Instructorships" that offer new Ph.D.'s the opportunity to work with mentors teaching in the common core.

Crucial to all efforts to improve the quality of teaching is recognizing good teaching in the tenure and promotion process.

Crucial to all efforts to improve the quality of teaching is recognizing good teaching in the tenure and promotion process. But how, exactly, can one document good teaching in order to reward it? Research has a tangible product: it results in articles and books. What can be cited to buttress a claim that someone is an accomplished teacher?

Student evaluations are used at many institutions; and while they have value, they also have limitations. A determination about teaching excellence should not rest solely with students, but who else can offer judgment? Some suggest it should be colleagues. "Too often," says a report from the Higher Education Research Program at the University of Pennsylvania, "teaching is seen as private, protected by academic freedom, and conducted in the classroom behind closed doors." A study by the Great Lakes Colleges Association makes the same point: "The art of teaching needs to be less private, less protected." Professor Lewis Miller of Indiana University suggests that campuswide faculty committees be created and charged with "naturalizing what for many of us is the foreign and often forbidding activity of collegial observation."[127]

Some colleges and universities are using "teaching portfolios" to make teaching achievements demonstrable to those who make judgments about tenure and promotion. Such a portfolio might include syllabi, examinations, graded papers, statements from colleagues and students—even a videotape of the faculty member teaching. Peter Seldin, a professor of management at Pace University who has been developing the concept, says that a teaching portfolio should

suggest the scope and quality of a professor's teaching performance. It is to teaching what lists of publications, grants and honors are to research and scholarship."[128]

A program recently established by the National Endowment for the Humanities encourages colleges and universities to recognize teaching with one of the highest honors: an endowed professorship. Grants of up to $300,000, which are to be matched by nonfederal monies on a three-to-one basis, help colleges and universities establish a prestigious senior rank for teaching. At Ohio University in Athens, Ohio, and at the College of Saint Scholastica in Duluth, Minnesota, at Gettysburg College in Gettysburg, Pennsylvania, and at Colby College in Waterville, Maine, public funds support Distinguished Teaching Professorships. Through such honors, excellent teachers can begin to enjoy the national recognition that usually goes to their colleagues who have focused on research. Through such a use of public funds, the federal government can indicate that the transmission of knowledge, as well as its extension, is a national priority.

Institutions of higher learning should continue to encourage and recognize serious and thoughtful research.

Institutions of higher learning should, of course, continue to encourage and recognize serious and thoughtful research—as should private and public foundations. Scholars preserve the record of human accomplishment and make it accessible in many ways: through authoritative editions of the papers and writings of George Washington, Frederick Douglass, Mark Twain, Jane Addams, and Martin Luther King, Jr., for example, or through research tools such as *The Encyclopedia of Islam*, *The Great Dictionary of the Yiddish Language*, and a dictionary of Sioux languages spoken in the Great Plains region—all projects supported by the National Endowment for the Humanities. Scholars explore our own and other cultures, sometimes quite literally, as in NEH-funded archaeological excavations at sites ranging from a seventeenth-century English colony at Saint Marys City in Maryland, through a Maya complex in the Petexbatún region of Guatemala, to an ancient site in Gordion, Turkey, where there are Hittite and Phrygian ruins. Some scholars write with such breadth and liveliness that their books—such as James M. McPherson's *Battle Cry of Freedom* or Simon Schama's *Citizens*—are widely read on campus and beyond. With care and learning, researchers engage in a variety of activities that help us better understand ourselves and the world.

Indeed, research and teaching need not stand in opposition. "I am certain that I have become a better researcher,

a better theoretical chemist, because I've had to teach undergraduates . . . ." says Roald Hoffman, Nobel Prize-winning chemist at Cornell University. "The more I taught beginning classes, the more important it became to me to explain."[129] The classroom can benefit research and be benefited by it. Observes University of Chicago professor Leon Kass, "Teaching a text requires understanding it; and that often involves one in a great deal of scholarly work, including translation, philology, and reading in secondary sources."[130]

Particularly if, as Ernest Boyer has suggested, we change the way we think about scholarship so that it includes activities besides those that lead to publication, then the connection between the study and the classroom is clear.[131] A program of reading that moves across centuries and disciplines can be a scholarly activity, whether or not it leads to an article or book; and for the teacher of broadly conceived undergraduate courses, such reading can be a source of immense enrichment.

The goal is not to displace research with teaching but to create an environment in which both thrive. The aim is what William Arrowsmith once called "an Emersonian university," a place of learning "where the great teacher has equal honor with the great scholar."[132]

Some evaluate colleges and universities on the basis of price tag, believing that the more expensive an institution, the better.

Informed Choice

Good teaching would be strongly encouraged if parents and students chose colleges and universities on the basis of instructional quality. As it is, people consider such factors as "reputation" and "environment" more often than they do good teaching. Some evaluate colleges and universities on the basis of price tag, believing that the more expensive an institution, the better. A recent Gallup poll showed that 38 percent of high-school students think the more a school costs, the better education it offers. A 1988 article in *New England Monthly* reported on Mount Holyoke College's discovery that the higher a tuition hike, the more applications the school could expect. Putting this finding into play has become known as the "Chivas Regal strategy." It leads a school to charge at least as much as other schools in the same league—in order to prove that it is as good.[133]

It may be that consumers do not emphasize quality of instruction because information about it is not readily available. There are dozens of guidebooks to colleges and universities on the market. With their help a person can find out how big a given institution is, the size of its stadium, and the most popular night spots. One can discover the most frequently chosen majors, learn whether or not there is a choral group or rugby team on campus, and find out who the school's recent speakers have been. The guidebooks offer a wealth of information—except when it comes to the single thing most important to know when choosing a school: the quality of undergraduate education.

Even guides that purport to assess the quality of undergraduate instruction typically do not. One aspect of the "Best Colleges" rating issued by *U.S. News & World Report* each fall is "instructional quality." The factors used to assess this attribute in the 1990 ratings were full-time student to full-time faculty ratios; the per-student instructional budget, reflecting faculty salaries; and the percentage of full-time faculty members with doctorates.[14] But neither low student-faculty ratios nor high faculty salaries necessarily indicate good teaching. If many faculty members have minimal or no teaching responsibilities, introductory classes will still be very large; and an instructional budget inflated by high salaries for famous professors who teach graduate students when they teach at all does nothing to improve the lot of the undergraduate. Nor is it of much use to know the percentage of full-time faculty who have Ph.D.'s if much undergraduate teaching at an institution is done by teaching assistants and part-time instructors who do not have doctorates.

Neither low student-faculty ratios nor high faculty salaries necessarily indicate good teaching.

How can students and their parents judge how much a college or university values teaching? A place to start is with the institution's catalog:

- Are there requirements? Do they reflect the institution's having grappled with the question of what its graduates should know? Is it possible to earn a bachelor's degree without having explored major areas of knowledge?
- Do the requirements direct students to broad-based courses—Western Civilization, for example, or Masterpieces of World

Literature—rather than to courses on brief periods and narrow themes?

There are also questions that should be put directly to the college or university. They might include the following:

- What is the length of the academic year? How many weeks of instruction does a student receive for a year's tuition? While quantity does not necessarily equal quality, time spent on the task of teaching is a reflection of how much it is valued.
- What is the ratio of part-time to full-time faculty? While many part-time teachers are fine instructors, how much they are used does indicate an institution's priorities. If the part-time to full-time ratio is high, an institution is giving over many of its teaching responsibilities to the faculty it pays the least. At institutions that have doctoral programs, students and parents should, for the same reasons, inquire about the number of classes taught by graduate students.
- Who teaches introductory courses? What is the likelihood that a student will find tenured faculty in Principles of Economics, General Biology, or History of the United States? Because of their breadth, such courses are among the most intellectually demanding to teach. They require wide-ranging study as opposed to the more narrow focus of publication. Whether or not senior faculty commit themselves to such courses speaks to the value the institution places on teaching. The degree of senior faculty members' commitment is also important. Do they meet with students and grade their papers, or do they only lecture to large groups?
- What size are introductory courses? It is almost universally agreed that teaching should engage students, should draw them

Whether or not senior faculty commit themselves to introductory courses speaks to the value the institution places on teaching.

into a subject and encourage them to explore and ask questions. Lecture classes of 300 or 400 students do not typically provide such opportunities. They do make a statement about the resources an institution is willing (or unwilling) to commit to students at the beginning of their college careers.

- Are there outward and visible signs that a college or university values teaching? Ideally one would know how much teaching matters in the tenure and promotion process, but such information is hard to come by and harder to evaluate. Parents and students can determine if there are substantial rewards for teaching—not only recognition at commencements and annual prizes but also chairs and professorships conferred for excellence in teaching. Regular meetings in which faculty members take up issues of teaching and curriculum also indicate a campus where undergraduate education is a subject of concern.

A college education is an enormous investment. At an elite private school, it can cost almost as much as a median-priced house; and surely that is cause to choose carefully. But even more important is the intellectual experience one stands to gain by a well-considered choice: the opportunity to be in the company of outstanding teachers and to explore with them the great deeds and ideas that have shaped the world.

The Parallel School

One area of education has remained relatively free of tyrannical machines: programs for general audiences. Evidence for the vitality of "the parallel school"—as cultural activities intended for the public are sometimes called—is abundant:

- In each of the years from 1986 through 1988, museum attendance surpassed 600 million.
- In the late 1970s, a few hundred citizens participated with scholars in book discussion programs in Vermont libraries. Since then more than 5 million people have participated in such programs in libraries all over the nation.
- In 1963, the Utah Shakespearean Festival in Cedar City, Utah, sold 3,240 tickets. In 1990, sales topped 100,000 for productions of *The Two Gentlemen of Verona*, *Romeo and Juliet*, and *Titus Andronicus*.
- A survey in Washington, D.C., showed museum going to be the most popular leisure activity.
- A survey in Boston showed events by nonprofit cultural groups drawing more than twice as many people as professional sports events.
- Across the United States, people have, for the fourth year in a row, spent more to attend events like legitimate theater and opera than to attend spectator sports.[135]

A survey in Boston showed events by nonprofit cultural groups drawing more than twice as many people as professional sports events.

Sponsored by a variety of groups and organizations, public programs are as diverse as the nation itself. Among current museum exhibitions being supported by the National Endowment for the Humanities are "Familia y Fe" or "Family and Faith," an exhibition in Santa Fe, New Mexico, that explores the heritage of the Hispanic population; "The Way to Independence: Memories from a Hidatsa Indian Family" in Omaha, Nebraska; "Caribbean Festival Arts" in Brooklyn, New York; "Russian America: The Forgotten Frontier" in Tacoma, Washington, and Anchorage, Alaska; and "From Field to Factory: Afro-American Life, 1915-1940" in Indianapolis, Indiana; Youngstown, Ohio; and Jersey City, New Jersey.

State humanities councils take educational programs to business people in New Jersey and Hawai'i, to schoolchildren and their parents in Utah, to new adult readers in Kentucky and North Carolina. Groups sponsored by state humanities councils study local history in Searchlight, Nevada, and Escanaba, Michigan; the Spanish Armada in Stratton, Vermont; the civil rights movement in Wilmington, Delaware; the culture of Japan in Mexico, Missouri. Five state councils in the West produced an exhibition on regional trails, from early Indian pathways to modern highways. In the Midwest, state councils organized a series of projects about the Ohio River.

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In no country in the world do cultural institutions feel quite the degree of obligation to educate that museums, libraries, and other cultural organizations in the United States do. The Smithsonian Institution is not merely a repository, but a school, offering a variety of programs for learning. Forty offerings in its African-American Studies program attracted 10,000 people in 1989; 200 lecture courses, offered through the Smithsonian's Campus on the Mall, drew 70,000 students.[136] The New York Public Library draws people not only with its book and periodical collections, but also with exhibitions ranging from "A Sign and a Witness: 2,000 Years of Hebrew Books and Illuminated Manuscripts" to "Portugal-Brazil: The Age of Atlantic Discoveries."

Learning something often causes people to want to learn more, and so public programs benefit from and build upon one another. One city that has used this dynamic well is Louisville, Kentucky. With support from the National Endowment for the Humanities, Louisville cultural institutions in 1989 produced a citywide festival on the theater, music, opera, ballet, and painting of Russia from 1900 to

1930. Louisville citizens could watch and discuss a Chekhov play at the Actor's Theater, see a lecture-demonstration on *Scheherazade* at the Louisville Ballet, hear the Louisville Orchestra play Scriabin, and listen to a music critic discuss his work. The combined programs had an attendance of more than 58,000. Hundreds of thousands of other Kentuckians watched special television programs on the festival.[137]

In September of 1990, millions of people in every part of the country watched "The Civil War," a highly acclaimed series on public television that the National Endowment for the Humanities helped make possible. The film showed how compelling history is when it is a story well told; its many offshoots showed the power of a well-conceived program to generate other cultural and educational activities:

The Civil War film showed how compelling history is when it is a story well told.

- Alfred A. Knopf published an illustrated history to accompany the Civil War documentary. The Library of America, as part of its series of the writings of notable Americans, issued volumes on the writings of Grant and Sherman.
- General Motors, one of the film's major funders, underwrote the development of related classroom materials and made 75,000 sets of them available for free.
- The Public Broadcasting Service licensed "The Civil War" to colleges to offer as a telecourse in 1991.
- Florentine Films, which produced "The Civil War"; WETA, the presenting station; the Corporation for Public Broadcasting; and the Center for Interactive Educational Technology undertook development of an interactive video that will enable students to call up original Civil War diaries, essays, journals, letters, and photographs and to have access to commentary by leading historians.
- WETA organized lectures and battlefield tours in connection with the film.

- The Smithsonian Institution offered "The Epic Civil War: The Making of a Landmark Documentary," a course featuring the producer and director of "The Civil War," Ken Burns.
- The American Library Association made plans to launch a nationwide reading, viewing, and discussion project in connection with the Civil War series in libraries across the nation.

The practices of formal institutions of education sometimes affect the parallel school. The same status system that devalues the teaching of undergraduates gives little esteem to programs intended to educate the public. "An office of continuing education is often fringe, marginal," says Judith Ruderman, who heads such an office at Duke University. It can be difficult to persuade scholars to teach in programs not viewed as central to the institution's mission. Once having done it, however, many scholars are eager to continue. "People teach in these programs because they believe in them," says Ruderman. "They like working with older, nontraditional students."[138]

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The parallel school also affects formal education, providing, for example, challenging and enlivening curricular materials. Three children's films, "Castle," "Cathedral," and "Pyramid," all based on David Macaulay's highly acclaimed books and produced for public television with funding from the National Endowment for the Humanities, are now widely used in schools. The series "Voices and Visions" on American poetry, also funded by the NEH for public television, is used in colleges and universities.

Those involved in the parallel school sometimes undertake efforts specifically aimed at strengthening formal education. State humanities councils have directed many programs to elementary and secondary teachers and administrators. In Connecticut, teachers have gathered at the Hartford homes of Mark Twain and Harriet Beecher Stowe for a two-week seminar on these writers and at Mystic Seaport Museum for a three-week program on maritime history. In Texas, principals and other school administrators have come together with scholars to read the *Odyssey* and *Dr. Faustus*. The Valentine Museum in Richmond, Virginia, sponsors summer programs for elementary and secondary teachers.

as does the Newberry Library in Chicago, Illinois.

The influence of the parallel school is widespread—and the example it offers is important. Unencumbered by tyrannical machines, the parallel school serves as a model for how education can thrive when it is characterized by a diversity of opportunities and by audiences who can choose freely among them.

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Recommendations and Conclusion

"Images are not arguments," as Henry Adams once observed,[139] but they are powerful instruments for crystallizing ideas and clarifying understanding. William James's "tyrannical machine" helps us see, for example, why some practices continue long after they have become counterproductive. Once "institutionized," as James put it, these practices become pervasive. Expectations, organizations, even professions grow up around them until the practices themselves become immune to even the most enlightened criticism. No matter how widespread the opinion that the practices are harmful, they endure.

The image of the tyrannical machine also helps us see the futility of assigning blame. Often people who perpetuate poor educational practices are dissatisfied with what they do; but, caught up as they are in the workings of a tyrannical machine, they find it difficult to act otherwise. Imagine a high-school social studies teacher who, not having studied much history in college, wants to learn more. The in-service training offered by his school system is pedagogical. In this particular year, its entire focus is a teaching method that has exactly sixteen steps. The social studies teacher can, theoretically, bypass the in-service offering and take a history course at the local college; but the in-service course is free while the college requires tuition. Moreover, the school system has established a plan of merit pay, and teachers will be judged according to whether or not they demonstrate the sixteen-step teaching method in their classes. Given such circumstances, who can blame the teacher for not learning more about his subject? He is caught up in a tyrannical machine.

Or imagine a young faculty member who wants to make a career at a college or university. She enjoys her students, likes trading ideas with them after class, and has in mind some interesting projects they could undertake. But if they write a paper or do an experiment, who will evaluate it? The faculty member cannot take the time. Indeed, if she does not cut back the hours she spends with students, her dissertation is never going to be revised; and if she fails to get a book out of it soon, she probably will not get tenure. Given such circumstances, why berate the faculty member for neglecting students? She is caught up in a tyrannical machine.

The most effective course for dealing with tyrannical machines is to provide alternative systems and to ensure that people can choose—and choose wisely—among them. Thus:

In elementary and secondary education

- Parents should be able to choose the school their child attends. Choice is not only an instrument of equity, it sets in motion an array of forces leading to more effective schools.
- Prospective teachers should be able to choose paths to certification different from the traditional one. This will bring diversity to the teaching force, allow comparisons about the most effective ways of preparing teachers, and encourage schools of education to improve their programs in order to compete.
- Teachers in the schools should have abundant opportunities to study the subjects they teach. In-service training, in particular, should provide alternatives to studying pedagogy in isolation from subject matter.
- Those involved in textbook selection need alternatives to the mechanical criteria commonly used to select textbooks. They should make use of textbook reviews done by scholars and teachers in the field to inform their choices. Schools should be

encouraged to use alternatives to textbooks: stories, speeches, documents, and other authentic materials.

- We need alternatives to the SAT, such as the tests of the National Assessment of Educational Progress, to tell us what students know and are able to do and how our schools are performing.

In higher education

- Colleges and universities should develop alternative paths to recognition and reward, paths that emphasize teaching as well as research. At the same time, steps should be taken to remedy problems that have, in part at least, been a by-product of an excessive emphasis on research: for example, the exploitation of part-time instructors, disarray in undergraduate curricula, and overly narrow training of graduate students.

- Prospective students and their parents need to exercise *in an informed way* the choices available to them in higher education. Current guidebooks are often of little help in determining which colleges and universities sufficiently value teaching, and so students and parents should learn to make this judgment for themselves. They should learn, for example, how to read a college catalog in order to determine if the curriculum is well conceived because that is an important indication of whether or not teaching is valued.

Understanding the programs of elementary schools or the curricula of universities takes effort and hours. Within institutions of education, changing the way textbooks are selected, or students assessed, or candidates for tenure evaluated can be an enormous challenge. The reforms advocated in this report are not easy, and so it is well to conclude by reminding ourselves why they are worth undertaking. It is more than a matter of having graduates who

know when the Civil War occurred or who Churchill was. It is more than a matter of having a work force competitive in the world. The ends of education reach beyond such things, important though they are.

As William James described it, the purpose of education is to cultivate judgment: "We learn what types of activity have stood the test of time; we acquire standards of the excellent and durable."[140] We learn what James called "the critical sense": "the feeling for a good human job anywhere, the admiration of the really admirable, the disesteem of what is cheap and trashy and impermanent." The ability to make such judgments, widely distributed, is particularly crucial in a society where the people are sovereign. "If you ask in what line it is most important that a democracy like ours should have its sons and daughters skillful," James wrote, "you see that it is in this line more than any other."

Ultimately, education aims at cultivating the wisdom that democracy requires: wisdom to make sound political judgments about who shall lead and make laws, and wisdom to make sound personal judgments about how to live a life and know the purpose of one's days. In a self-governing society, individuals make these decisions; and the conclusions they reach, taken altogether, set the nation's course. If education fails in a democracy, hope for the future fades. If education succeeds, a democratic society can hold a positive vision, can imagine itself progressing until, in William James's words, "its institutions glow with justice and its customs shine with beauty."

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